

A CLAMPING TOOL FOR CONNECTING COAXIAL CABLE AND TERMINAL

BACKGROUND OF THE INVENTION

(1) Field of the invention

This invention relates to a clamping tool for connecting coaxial cable and terminal, especially a clamping tool which can lead the central conductor of a coaxial cable into a guiding tube to prevent it from being twisted in clamping process.

(2) Description of the Prior Art

Please refer to a Taiwan Utility Model Patent (publication no.348904), the conventional coaxial cable terminating tool is composed of a handle, an auxiliary handle, a guiding block, a molding block, an auxiliary molding block, a pivot post and a push block. between the clamping end of the two handles have a space, the guiding block being installed in center of the space, the guiding block having a guiding groove, the molding block and the auxiliary molding block being pivoted respectively at two sides of the space and faced to each other, the near end of the two molding blocks having respectively a taper groove which can form a clip aperture when the two molding blocks moved toward each other, further, the pivot post being pivoted on the molding block for pushing the molding block to move. The auxiliary handle is pivoted opposite to the handle, the inner side of the auxiliary handle having a clamping part, two ends of a tension spring being connected respectively to the clamping part and the handle. The push block is pivoted on the clamping part and can move into the guiding groove in clamping process, the front end of the push block having a recess faced to the clip aperture. Accordingly, the terminal is placed in the recess of the push block and the coaxial cable is clipped by the two molding block, once the operator press the two handles inwardly, the push

block can push the terminal to support on the clip aperture until it is clamped to connect with the coaxial cable. However, the peeled central conductor of coaxial cable can't be kept on the straight in clamping process, thus the peel central conductor may be twisted in clamping process to cause a short circuit or breakdown
5 in the connecting point.

Please refer to another Taiwan Utility Model Patent (publication no.449165), the patent disclose a clamping tool which is composed of two handles, a molding block, and a push rod . One end of the handle have a holding part and the other end have a clamping part, the clamping part can moved near to each other to clamp a terminal
10 to connect with a coaxial cable and when pressing the handles inwardly. The molding block is composed of a seat and a clamping head, in the clamping head having a recess for depositing the terminal, the push rod is situated opposite to molding block for supporting the terminal in clamping process. However, the handles of the clamping tool will rotate around the pivoted point to clamp the
15 terminal, the two handles can't be moved on the straight, that means the clamping force is not parallel with the terminal. In addition, the peeled central conductor of coaxial cable can't be kept on the straight in clamping process when using such kind of clamping tool to connect terminal and coaxial cable , thus the central conductor may be twisted in clamping process to cause a short or breakdown in the connecting
20 point.

SUMMARY OF THE INVENTION

It is therefore the main object of this invention to provide a clamping tool for connecting coaxial cable and terminal, especially a clamping tool which can lead the central conductor of coaxial cable into a guiding tube to prevent it from being

twisted in clamping process.

It is another object of this invention to provide a clamping tool for connecting coaxial cable and terminal, on top the clamping tool having two opposite clip pieces, the two pieces can be moved toward to each other when pressing the clamping handles inwardly, the near end of the two clip pieces having respectively a
5 semicircular aperture which can form a circular aperture to clip coaxial cable and press the top of terminal in clamping process.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings, which illustrate the preferred embodiments and modes of operation
10 of the invention, and in which like reference characters designate the same or similar parts throughout the several views:

Fig.1 is an exploded view showing a clamping tool for connecting coaxial cable and terminal of this invention;

Fig.2 is a partial sectional view of this invention;

15 Fig.3 is a plan view of this invention;

Fig.4 is a plan view showing the status of the clamping tool to clamp a terminal to connect with a coaxial cable; and

Fig.5 is a plan view showing the status of the clamping tool after clamping to connect a coaxial cable and a terminal.

20 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the Fig.1 and Fig.2, the present invention, a clamping tool for connecting coaxial cable and terminal, is composed of a connecting frame (1), two clip pieces (15), two clamping handles (2), four connecting links (22), a sliding seat (3), a clamping head (321), two guiding post (331) and a guiding tube (4). On top of

the connecting frame (1) have an aperture (11) and two upright part (12), the top of each upright part (12) having respectively a through hole (121), two sides of each upright part (12) having respectively a pivot hole (13), further, two sides of the connecting frame (1) having respectively two parallel ellipse holes (14). One end of the clamping handle (2) is pivoted on the upright part (12) of the connecting frame (1) by inserting a connecting pin (131) into the pivot holes (13) and one end of the clamping handle (2), thus the clamping handle (2) can be rotated around the pivoted point. Two sides of each clamping handle (2) have respectively a connecting hole (21), one end of the connecting link (22) being pivoted on the connecting hole (21) by means of a pivot pin (211), the other end of the connecting link (22) being located at the ellipse hole (14) by means of a locating bolt (141) and a nut. Two sides of the sliding seat (3) have respectively two second pivot holes (31), thus the sliding seat (3) can be installed on the connecting frame (1) by inserting the locating bolt (141) into the pivot holes (31), further, the top of the sliding seat (3) having a screw hole (32) and two fixing holes (33) and the bottom of the sliding seat (3) having a locating hole (34) opposite to the screw hole (32). The clamping head (321) have a central hole (32) and can be screwed into the screw hole (32). One end of the guiding post (331) is inserted into the fixing hole (33) with a first tension spring (3311), the other end of the guiding post (331) together with clamping handle (2) is fixed on the upright part (12) by the connecting pin (131), the top of the guiding post (331) having a recess (332) for depositing a joint post (333) and a second spring (336), the bottom of the joint post (333) having a blind hole (334), one end of the second tension spring (336) being supported on the blind hole (334) to push the joint post (333) into the recess (334) firmly.

The two clip pieces (15) are installed opposite on the two upright parts (12) of the connecting frame (1) respectively, two side of each clip piece (15) having respectively a sliding hole (151), the connecting pin (131) can insert into the sliding hole (151) for installing the clip piece (15) on the upright part (12), the top
5 of each clip piece (15) having a calabash hole (152), the end of the joint post (333) being inserted into the calabash hole (152) and connected with a cap. A third spring (155) is support between the end of the clip piece (15) and the side of the guiding post (331) so as to push the clip pieces (15) toward to each other, further, the other end of each clip piece (15) having a respectively a semicircular aperture (154), the
10 two opposite semicircular aperture (154) can form a circular aperture when the two clip pieces (15)

Referring to Fig.3 to fig.5, the guiding tube (4) have a guiding hole (41), one end of the guiding tube (4) being inserted through the central hole (322) of the clamping head (321) and fixed on the locating hole (34) of the sliding seat (3) with a
15 nut, a tension spring (42) is supported between the screw hole (32) and the locating hole (34), the other end of the guiding tube (4) extending to the aperture (11) of the connecting frame (1), thus the guiding tube (4) can be moved together with the sliding seat (3). The terminal (5) is placed on the clamping head (321), such as shown in Fig.5, the top of the terminal (5) is stopped by the two clip pieces (15).
20 Once the operator press the clamping handles (2) inwardly, the connecting links (22) will moved along the ellipse holes (14) to push the sliding seat (3) upwardly, meanwhile the clamping head (321) installed on the sliding seat (3) can push to locate the terminal (5), the coaxial cable (51) is clipped by the circular aperture (154) of the two clip pieces (15), the central conductor of the coaxial cable (51) can be

inserted into the central hole (41) of the guiding tube (4), such as shown in fig.5.

When the operator press the clamping handles (2) continuously, the sliding seat (3) and the clamping head (321) can move upwardly to clamp the terminal (5) continuously until it is connected with the coaxial cable (51), such as shown in

5 Fig.5. The guiding tube (4) can be moved upwardly with the sliding seat (3) when the operator press the clamping handles (2), thus the central conductor of the coaxial cable (51) can be inserted into the guiding tube (4) easily and can be kept on the straight in the clamping process, further, the tension spring (42) installed between the sliding seat (3) and the and the guiding tube (4) can diminish the
10 clamping force to prevent the central conductor from being twisted by excessive clamping force.

It is understood by those skilled in the art that the forgoing description is a preferred device and that various changes and modifications may be made in the invention without departing from the spirit and scope thereof.